

Form PTO-1449 INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Use several sheets if necessary)	U.S. Department of Commerce Patent and Trademark Office	ATTORNEY DOCKET NO. 0571R2	SERIAL NO. 09/311,689
	APPLICANTS Aragula Gururaj Rao and Keith R. Roesler		
	FILING DATE May 13, 1999	GROUP	

U.S. PATENT DOCUMENTS

Examiner Initial		Document Number	Date	Name	Class	Subclass	Filing Date If Appropriate
KK	A1	5,258,300	11/02/93	Glassman, <i>et al.</i> , "Method of Inducing Lysine Overproduction in Plants"	435	240.4	06/09/88
	A34	5,674,833	10/7/99	Mikkelsen, <i>et al.</i> , "Detergent Compositions Containing Protease and Novel Inhibitors for Use Thereof"	C11D	3/386	
	A35	5,527,487	6/18/96	Mikkelsen, <i>et al.</i> "Enzymatic Detergent Composition and Method for Enzyme Stabilization"	C11D	3/386	

FOREIGN PATENT DOCUMENTS

		Document Number	Date	Country	Class	Subclass	Translation Yes	No
KK	A2	WO 048/5970	05/20/92	EP	C12N	15/82		
KK	A23	WO 93/20175	10/14/93	PCT	C11D	3/286		
KK	A24	WO 92/05239	04/02/92	PCT	C11D	3/386		
KK	A25	WO 90/07862	07/26/90	PCT	—	—		
KK	A26	WO 95/27068	10/12/95	PCT	C12N	15/82		
KK	A27	WO 94/10315	05/11/94	PCT	C12N	15/29		
KK	A28	WO 94/16078	07/21/94	PCT	C12N	15/29		

OTHER DOCUMENTS (Including Author, Title, Date Pertinent Pages, Etc.)

KK	A3	Burow, <i>et al.</i> , "Suppression of Phaseolin and Lectin in Seeds of Common Bean, <i>Phaseolus vulgaris</i> L.: Increased Accumulation of 54 kDa Polypeptides is not Associated with Higher Seed Methionine Concentrations, "Mol. Gen. Genet.; Vol. 241; pp. 431-439;(1993)
KK	A4	Karchi, <i>et al.</i> , "Seed-specific Expression of a Bacterial Desensitized Aspartate Kinase Increases the Production of Seed Threonine and Methionine in Transgenic Tobacco," <i>The Plant J.</i> ; Vol. 3;pp.721-727;(1993)
KK	A5	Jonassen, I., "Characteristics of Hiproly Barley I. Isolation and Characterisation of Two Water-soluble High-lysine Proteins," <i>Carlsberg Res. Commun.</i> ; Vol. 45; pp. 47-58; (1980)
KK	A6	Svendsen, I.B., <i>et al.</i> , "Characteristics of Hiproly Barley III. Amino Acid Sequences of Two Lysine-rich Proteins"; <i>Carlsberg Res. Commun.</i> ; Vol. 45; pp. 79-85; (1980)

Keith R. Roesler 5/20/99



KK	A7	McPhalen, <i>et al.</i> , "Crystal and Molecular Structure of the Serine Proteinase Inhibitor CI-2 from Barley Seeds"; <u>Biochemistry</u> ; Vol. 26; pp. 261-269; (1987)
	A8	Clore, <i>et al.</i> , "Comparison of the Solution and X-ray Structures of Barley Serine Proteinase Inhibitor 2"; <u>Protein Eng.</u> ; Vol. 1, pp. 313-318; (1987)
	A9	Zabin <i>et al.</i> , "Approaches to Predicting Effects of Single Amino Acid Substitutions on the Function of A Protein"; <u>Biochemistry</u> ; Vol. 30(25); pp. 6230-6240; (1991)
	A10	Summers <i>et al.</i> , "A Conservative Amino Acid Substitution, Arginine for Lysine, Abolishes Export of a Hybrid Protein in <i>E. Coli</i> ," <u>J. Biol. Chem.</u> , Vol. 264(33), pp. 20082-20088, (1989)
	A11	Ringe, D., "The Sheep in Wolf's Clothing"; <u>Nature</u> , Vol. 339, pp. 658-659, (1989)
	A12	Hirabayashi <i>et al.</i> , "Effect of Amino Acid Substitution by Site-directed Mutagenesis on the Carbohydrate Recognition and Stability of Human 14-kDa β -Galactoside-binding Lectin"; <u>J. Biol. Chem.</u> , Vol. 266, pp. 23648-23653, (1991)
	A13	Van Eijsden, <i>et al.</i> , "Mutational Analysis of Pea Lectin. Substitution of Asn ¹²⁵ for Asp in the Monosachharide;binding Site Eliminates Mannose/Glucose-binding Activity," <u>Plant Mol. Biol.</u> , Vol. 20, pp. 1049-1058(1992)
	A14	Leatherbarrow, <i>et al.</i> , "Design of a Small Peptide-Based Proteinase Inhibitor by Modeling the Active-Site Region of Barley Chymotrypsin Inhibitor 2," <u>Biochem</u> , Vol. 30, pp. 10717-10721 (1991)
	A15	Jackson, <i>et al.</i> , "Contribution of Residues in the Reactive Site Loop of Chymotrypsin Inhibitor 2 to Protein Stability and Activity," <u>Biochem.</u> , Vol. 33, pp. 13880-13887 (1994)
	A16	Jandu <i>et al.</i> , "Role of Arginine 67 in the Stabilization of Chymotrypsin Inhibitor 2: Examination of Amide Proton Exchange Rates and Denaturation Thermodynamics of an Engineered Protein," <u>Biochem.</u> , Vol. 29, pp. 6264-6269 (1990)
	A17	Kjaer, <i>et al.</i> , "Sequence Specific Assignment of the Proton Nuclear Magnetic Resonance Spectrum of Barley Serine Proteinase Inhibitor 2," <u>Carlsberg Res. Commun.</u> ; Vol. 52; pp. 327-354; (1987)
	A18	Rao, <i>et al.</i> , "Synthesis and Characterization of Defensin NP-1," <u>Int. J. Pep. Prot Res.</u> ; Vol. 40; pp. 507-514; (1992)
	A19	Berry-Lowe, <i>et al.</i> , "The Nucleotide Sequence, Expression, and Evolution of One Member of a Multigene Family Encoding the Small Subunit of Ribulose-1,5-Bisphosphate Carboxylase in Soybean", <u>J. Molecular and App. Gen.</u> ; Vol. 1; pp. 483-498; (1982)
	A20	Cashmore, A., "Nuclear Genes Encoding the Small Subunit of Ribulose-1,5-Bisphosphate Carboxylase" <u>An Agricultural Perspective</u> , Pelham, New York, pp. 29-38, 1983
	A21	Coruzzi, <i>et al.</i> , "Nucleotide Sequences of Two Pea cDNA Clones Encoding the Small Subunit of Ribulose 1,5-Bisphosphate Carboxylase and the Major Chlorophyll <i>a/b</i> -binding Thylakoid Polypeptide," <u>J. Biol. Chem.</u> , Vol. 258(3); pp. 1399-1402; (1983)
✓	A22	Dunsmuir, <i>et al.</i> , "The Major Chlorophyll <i>a/b</i> Binding Protein of Petunia Is Composed of Several Polypeptides Encoded by a Number of Distinct Nuclear Genes," <u>J. Molecular and App. Gen.</u> , Vol 2' pp. 285-300 (1983)
KK	A29	Williamson <i>et al.</i> , "Nucleotide sequence of barley chymotrypsin inhibitor-2 (CI-2) and its expression in normal and high-lysine barley", <u>Eur. J. Biochem.</u> , 165(1): 99-106, 1987
KK	A30	McPhalen <i>et al.</i> , "Crystal and molecular structure of chymotrypsin inhibitor 2 from barely seeds in complex with subtilisin Novo", <u>Proc. Natl. Acad. Sci. USA</u> , 82: 7242-7246, 1985
KK	A31	Cordero, M.J., "Z.mays mRNA for subtilisin-chymotrypsin inhibitor" EMBL Accession No. X69972, 1993

Kat. Len 5/22/91 -2-



KK	A32	Cordero <i>et al.</i> , "Expression of a maize proteinase inhibitor gene is induced in response to wounding and fungal infection: systemic wound-response of a monocot gene", <u>The Plant Journal</u> , 6(2): 141-150, 1994
KK	A33	Chevalier <i>et al.</i> , "Z.mays mRNA for pis7", EMBL Accession No. X82187, 1994
KK	A36	Otzen and Fersht, "Folding of Circular and Permuted Chymotrypsin Inhibitor 2: Retention of the Folding Nucleus" <u>Biochemistry</u> 37:8139-8146 (1998)
KK	A37	Ladurner and Fersht, "Glutamine, Alanine or Glycine Repeats Inserted into the Loop of a Protein Have Minimal Effects on Stability and Folding rates" <u>J. Mol. Biol.</u> 273: 330-337, 1997).
EXAMINER K. A. K.		DATE CONSIDERED 5/22/01
EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.		

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OTHER DOCUMENTS (Including Author, Title, Date Pertinent Pages, Etc.)

KK	A38	Campbell, Alison F., "Protein Engineering of the Barley Chymotrypsin Inhibitor 2", <u>Plant Protein Engineering</u> , pp. 257-268 (1992)
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KK	A39	5,811,654	09/22/98	Jaynes et al.			01/24/97
↓	A40	5,597,945	01/28/97	Jaynes et al.			05/30/95
↓	A41	6,169,232 B1	01/02/01	Hey et al.			06/16/98

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